

Remarks

Claims 4 And 10, As Amended, Are Not Indefinite

Claims 4 and 10 have been rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as their invention. The Office Action states that the antecedent basis for the term "which" on line 4 of claim 4 and on line 12 of claim 10 is unclear. Applicants have now amended claims 4 and 10 to substitute the term "which body" for the term "which" in the specified claims. Applicants request that these rejections of their claims under §112 be withdrawn, and that claims 4 and 10, as amended, be allowed.

Claims 1-8 Are Not Anticipated By U.S. Patent No. 2,836,316 Of Schonrock

Claims 1-8 have been rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 2,836,316 of Schonrock. The Schonrock patent describes a refuse collection vehicle having one or two compactor units mounted on the frame adjacent to the front end of a separate dump body. As described at column 2, lines 56-58, the compactor unit "consists of a generally cylindrical or drum-like casing 30 having a substantially cylindrical chamber 32 therein". Within chamber 32 are located a plurality of substantially semicircular spaced plates 54 mounted on first shaft 50. A plurality of elevating fingers 60 are mounted on second shaft 58 so as to fit within the spaces between plates 54. A cam lever 62 is rigidly attached to first shaft 50 and adapted to cooperate with a cam surface 66 on one of the elevating fingers 60 so that rotation of cam lever 62 will cause the entire set of elevating fingers to rotate as shown in Figures 5-8. The Office Action states that the Schonrock patent discloses "a crusher panel 32 (54, 60) that is adapted to apply a downwardly directed compressive force to refuse material in the hopper compartment and to sweep said refuse

material from the hopper compartment into the storage compartment", as required by Applicants' claim 1. This description is somewhat confusing, since Schonrock's reference numbers 32, 54 and 60 do not describe a single structure or component but three separate and distinct components of the Schonrock assembly. As described above, the only structure in the Schonrock assembly that is remotely analogous to Applicants' crusher panel is the assembly of spaced plates 54. Rotation of plates 54 within the cylindrical chamber 32 of the Schonrock compactor may operate to apply a compressive force to refuse material in the chamber, but it does not sweep such material out of chamber 32. That action, by which the refuse material is moved into dump body 14, is carried out by a separate structure, namely elevating fingers 60, as is clearly shown by Figures 5-8. Consequently, since the Schonrock reference does not disclose or suggest "a crusher panel that is adapted to apply a downwardly directed compressive force to refuse material in the hopper compartment **and** to sweep said refuse material from the hopper compartment into the storage compartment", as required by Applicants' claims 1-8, the Schonrock reference cannot anticipate Applicants' invention, as described by claim 1, or by claims 2-8 which depend therefrom.

In addition, with respect to Applicants' claims 2 and 3, the Office Action states that "Schonrock teaches the crusher panel has a pivot end (not numbered) and a sweep end (not numbered), said pivot end being pivotally mounted so that said crusher panel may be pivoted about a crusher pivot axis at its pivot end between a first orientation in which the sweep end is generally disposed above the pivot end and a second orientation in which the sweep end is adjacent to the storage compartment floor." However, as pointed out above, the Schonrock reference discloses at least two separate structural members for performing functions analogous to the functions performed by Applicants' claimed crusher panel. The Schonrock structure which performs a function analogous

to the claimed function of applying a downwardly directed compressive force to material in the hopper comprises the plurality of spaced plates 54, and the structure which performs a function analogous to the claimed sweeping function of claim 1 comprises the elevating fingers 60. The spaced plates 54 are pivoted about a central axis; consequently, it is difficult to determine which "end" is the "pivot end". However, the elevating fingers 60 are pivoted about pivot axis 58, and consequently, the end away from the pivot axis may be considered to be the "sweep end". Nevertheless, if the position of the elevating fingers shown in Figures 5, 6 or 7 is considered to be the "first orientation", the elevating fingers do not meet the limitations of Applicants' claim 2 because the "sweep end" of elevating fingers 60 is generally disposed **below** the pivot end. For this reason, as well as those set forth above, the Schonrock reference cannot anticipate Applicants' invention, as described by claim 2, or claims 3-5 which depend therefrom.

With respect to Applicants' claim 4, the Office Action states that "Schonrock teaches the body (a) wherein the crusher panel is mounted adjacent to the rear end of the hopper compartment 24; (b) which includes means for pivoting the crusher panel about the crusher pivot axis between said first orientation and said second orientation to apply a downwardly directed compressive force to refuse material in the hopper compartment 24, and to sweep said refuse material from the hopper compartment into the storage compartment 14." However, as pointed out above, there is no single component in the Schonrock apparatus that is analogous to Applicants' claimed crusher panel which applies a downwardly directed compressive force to refuse material in the hopper **and** sweeps said refuse material out of the hopper. Therefore, for this reason, as well as the reasons set forth above, the Schonrock reference cannot anticipate Applicants' invention, as described by claim 4, or by claim 5 which depends therefrom.

With respect to Applicants' claim 5, the Office Action states that Schonrock discloses "an attachment mechanism (90, 84, etc.) for attaching one end of the crusher panel actuator to the crusher panel, said mechanism comprising a linkage system (90, 84, etc.) that permits the crusher panel to pivot between the first orientation and the second orientation through an arc of about 250°." This interpretation suggests that the Schonrock spaced plates 54 are analogous to Applicants' claimed crusher panel, since the "linkage" structures referred to are attached to shaft 50. However, as pointed out above, since the spaced plates are pivoted about a central axis, there is no "end" analogous to the claimed "sweep end" of the crusher panel. Consequently, for this reason, as well as the reasons set forth above, the Schonrock reference cannot anticipate Applicants' claim 5. Even if, however, the elevating fingers of the Schonrock assembly are considered analogous to the claimed crusher panel, and if the position of the elevating fingers shown in Figure 6 is considered to be the "first orientation" of elevating fingers 60 and the position shown in Figure 8 is considered to be the "second orientation", the elevating fingers do not meet the limitations of Applicants' claim 5 because the "sweep end" of elevating fingers 60 pivots only through an arc of no more than about 90°. Therefore, even in this alternative interpretation, the Schonrock reference cannot anticipate Applicants' invention, as described by claim 5.

With respect to claim 6, the Office Action states that Schonrock "teaches a reciprocating packer (60, part of crusher) that is mounted in the forward end of the hopper compartment 24 and is adapted to move refuse from the forward end of the hopper compartment towards the rear end of the hopper compartment so that it may be compacted and swept by the crusher panel." However, elevating fingers 60 of the Schonrock assembly do not move material so that it may be moved by another structure or component, as shown in Figures 5-8, as required by Applicants' claim 6.

Instead, the elevating fingers move material after it has been compressed and/or moved by spaced plates 54. Consequently, for this reason, as well as the reasons set forth above, the Schonrock reference cannot anticipate Applicants' invention, as described by claim 6.

For all of the reasons recited herein, Applicants request that the §102(b) rejection of their claims based on the Schonrock reference be withdrawn, and that claims 1-8, as amended, be allowed.

Claims 1-6, 9 and 10 Are Not Anticipated By U.S. Patent No. 7,070,382

Claims 1-6, 9 and 10 have been rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 7,070,382 of Pruteanu. The Pruteanu patent describes a refuse collection vehicle which includes a hopper compartment 24 and a storage compartment 22 with a drop area 64 therebetween. Within the storage compartment is mounted a generally vertical ejector panel 40 which is adapted to be moved back and forth along the length of the storage compartment by double acting hydraulic cylinder 44. Attached to the rear portion of the ejector panel 40 is a pivotally mounted packer-ejector assist panel 46 which may be rotated, when the ejector panel is in the forward position, to push material from the drop area into the storage compartment. As described at column 4, lines 20-23, "[t]he packer-ejector assist panel is in the form of a vertically pivoting blade which moves with a generally vertical ejector blade which travels the entire length of the storage enclosure during the ejection operation." In contrast, Applicants' crusher panel, as described in Applicants' claims 1-6, 9 and 10, as amended, **is not attached to Applicants' means for removing refuse material from the storage compartment.** Applicants' crusher panel does not, therefore, move with Applicants' ejector panel of claims 9 and 10, as amended, as the ejector panel moves between a forward position and a rear position. Consequently, since the

Pruteanu reference does not disclose or suggest a crusher panel that "is not attached" to the means for removing refuse material from the storage compartment, as required by Applicants' claims 1-6, or to Applicants' ejector panel, as required by Applicants' claims 9 and 10, the Pruteanu reference cannot anticipate Applicants' invention, as described by claims 1-6, 9 and 10, as amended. Therefore, Applicants request that the §102(b) rejection of their claims based on the Pruteanu reference be withdrawn, and that claims 1-6, 9 and 10, as amended, be allowed.

Claims 7 And 8 Are Not Obvious In View Of A Combination Of U.S. Patent No. 7,070,382 And U.S. Patent No. 2,836,316

Claims 7 and 8 have been rejected under 35 U.S.C. §103(a) as being obvious in view of U.S. Patent No. 7,070,382 of Pruteanu in view of U.S. Patent No. 2,836,316 of Schonrock. The Pruteanu and Schonrock references are described above.

The Office Action states that "[i]t would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Pruteanu by Schonrock to have means for removing refuse material from the storage compartment comprising a hoist that is adapted to raise the forward end of the storage compartment above the rear end thereof as an equivalent alternative removing means or ... as an additional removing means with ejector 40". However, such a combination, in which the Schonrock hoist is mounted on the Pruteanu apparatus, would still include a packer-ejector assist panel that is attached to a means for removing refuse material from the storage compartment, in the form of ejector 40. In contrast, Applicants' invention, as described in claims 7 and 8, as amended, requires a crusher panel that "is not attached" to the means for removing refuse material from the storage compartment.

If it is contemplated that a combination of the Schonrock and Pruteanu references could produce a device in which the hoist of Schonrock is substituted for the ejector panel 40 of Pruteanu, Applicants submit that such combination would also require the Schonrock assembly of spaced plates 54 and its elevating fingers 60. However, such a combination would not include "a crusher panel that is adapted to apply a downwardly directed compressive force to refuse material in the hopper compartment **and** to sweep said refuse material from the hopper compartment into the storage compartment", as required by Applicants' claims 7 and 8.

Neither the Pruteanu reference nor the Schonrock reference, or any combination thereof, disclose, suggest or render obvious Applicants' invention, as described in claims 7 and 8, as amended, which requires "a crusher panel that is adapted to apply a downwardly directed compressive force to refuse material in the hopper compartment **and** to sweep said refuse material from the hopper compartment into the storage compartment", which crusher panel "is not attached" to the means for removing refuse material from the storage compartment. Therefore, Applicants request that the §103(a) rejection of their claims based on the Pruteanu and Schonrock references be withdrawn, and that claims 7 and 8, as amended, be allowed.

Claims 1-5, 9-13 And 19 Are Not Obvious In View Of A Combination Of U.S. Patent No. 4,260,316 And U.S. Patent No. 7,070,382

Claims 1-5, 9-13 and 19 have been rejected under 35 U.S.C. §103(a) as being obvious over U.S. Patent No. 4,260,316 of Gollnick in view of U.S. Patent No. 7,070,382 of Pruteanu. The Pruteanu reference is described above. The Gollnick reference describes a side-loading refuse collection vehicle having a loading hopper which extends across approximately one third of the width of the

vehicle. Within the loading hopper is mounted a hopper plate 20 which is adapted to move through an arc of about 90° to lift refuse out of the hopper. A sweep panel 22 is pivotally attached to a packer plate 16 and adapted to sweep refuse material from the hopper plate through an opening in the packer plate and into a storage area. The sweep panel is carried by the packer plate as it moves along the length of the storage area.

The Office Action states that "[i]t would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Gollnick by the teaching of Pruteanu to have the crusher panel apply a downwardly directed compressive force to refuse material in a hopper compartment and to sweep said refuse material from the hopper compartment into a storage compartment by having the panel sweep a more forwardly rotated angle in order to be able to sweep more material from the hopper." However, both the Gollnick reference and the Pruteanu reference disclose a sweep panel (or a packer-ejector assist panel) that is attached to the packer plate (or the ejector blade), or the means for removing refuse material from the storage compartment.

Consequently, both the Gollnick sweep panel and the Pruteanu packer-ejector assist panel move with the ejector mechanism as it moves along the length of the storage area during the ejection operation. In contrast, Applicants' crusher panel, as described in Applicants' claims 1-5 and 9-13, as amended, **is not attached to Applicants' means for removing refuse material from the storage compartment.** Applicants' crusher panel does not, therefore, move with Applicants' ejector panel of claims 9-14, as amended, as the ejector panel moves between a forward position and a rear position. Consequently, neither of these references disclose or suggest a crusher panel that "is not attached" to the means for removing refuse material from the storage compartment, as

required by Applicants' claims 1-5, or to Applicants' ejector panel, as required by Applicants' claims 9-14.

With respect to claim 2, the Office Action states that "Gollnick teaches the crusher panel has a pivot end ... and a sweep end ..., said pivot end being pivotally mounted so that said crusher panel may be pivoted about a crusher pivot axis at its pivot end between a first orientation in which the sweep end is generally disposed above the pivot end and a second orientation in which the sweep end is adjacent to the storage compartment floor." However, Figure 2 clearly shows that the Gollnick sweep panel 20 is pivoted between a first orientation in which the sweep end is disposed **directly below** the pivot end and a second orientation in which the sweep end is adjacent to the storage compartment floor. In contrast, Applicants' claim 2 requires that the crusher panel be mounted so that it pivots between a first orientation in which the sweep end is generally disposed **above** the pivot end and a second orientation in which the sweep end is adjacent to the storage compartment floor.

With respect to claim 3, the Office Action states Gollnick teaches that "the transition floor ... diverges away from the sweep end of the crusher panel 20 as the sweep end ... approaches the storage ... [compartment] floor". However, Figure 2 of the Gollnick patent clearly shows that floor 40 is of constant radius throughout the range of motion of panel 20, and that the distance between the sweep end of panel 20 and the surface of floor 40 does not change as panel 20 pivots between its first orientation and its second orientation. In contrast, Applicants' claim 3 requires that the transition floor diverge away from the sweep end of the crusher panel as the sweep end approaches the storage compartment floor during pivoting of the crusher panel.

With respect to claim 4, the Office Action states that Gollnick teaches that crusher panel 20 is pivoted between a first orientation and a second orientation "to apply a downwardly directed compression force to refuse material in the hopper compartment 18". However, the Office Action also admits, on page 11, that "Gollnick does not clearly state whether the crusher panel applies the force downwardly." Even if the Gollnick apparatus is modified by Pruteanu (as the Office Action suggests with respect to claim 19) so as to have the crusher panel apply a downwardly directed compressive force, such combination would not meet the limitations of claim 4, as amended, because neither of these references disclose or suggest a crusher panel that "is not attached" to the means for removing refuse material from the storage compartment.

With respect to claim 5, the Office Action states that "Gollnick teaches ... a linkage system ... that permits the crusher panel to pivot between the first orientation and the second orientation through an arc of about 250 degrees." However, Figure 2 clearly shows that the range of pivotal motion of panel 20 is about 90° from the first orientation (shown in solid lines) to the second orientation (shown in dashed lines).

With respect to claim 12, the Office Action states that "the actuators 62, 80 & their standard controls" meet the limitation of Applicants' claimed over-center lock that is located and arranged to releasably lock the ejector panel in the extended orientation. Applicants can find no description of any actuator standard controls in the Gollnick reference, and consequently, they suggest that this basis of rejection is improper.

With respect to claim 13, the Office Action states that "the actuators 62, 80 & their standard controls" meet the limitation of Applicants' claimed over-center lock that is located and arranged to releasably lock the ejector panel in the retracted orientation. Applicants can find no description of any actuator standard controls in the Gollnick reference, and consequently, they suggest that this basis of rejection is improper.

With respect to claim 19, the Office Action states that "Gollnick teaches ... a crusher panel 20 having a pivot end and a sweep end, said pivot end being pivotally mounted on the header tube so that said crusher panel may be pivoted about a pivot axis at its upper end between a first orientation in which the sweep end is generally disposed above the pivot end and a second orientation in which the sweep end is adjacent to the storage compartment floor". However, Figure 2 clearly shows that the Gollnick sweep panel 20 is pivoted between a first orientation in which the sweep end is disposed **directly below** the pivot end and a second orientation in which the sweep end is adjacent to the storage compartment floor. In contrast, Applicants' claim 19 requires that the crusher panel be mounted so that it pivots between a first orientation in which the sweep end is generally disposed **above** the pivot end and a second orientation in which the sweep end is adjacent to the storage compartment floor.

For all of the reasons described above, Applicants request that the §103(a) rejection of their claims based on a combination of the Gollnick and Pruteanu references be withdrawn, and that claims 1-5 and 9-14, as amended, and claim 19 be allowed.

Claim 20 Is Not Obvious In View Of A Combination Of U.S. Patent No. 4,260,316, U.S. Patent No. 7,070,382 And U.S. Patent No. 5,209,537

Claim 20 has been rejected under 35 U.S.C. §103(a) as being obvious over U.S. Patent No. 4,260,316 of Gollnick in view of U.S. Patent No. 7,070,382 of Pruteanu, as applied to claim 19, and further in view of U.S. Patent No. 5,209,537 of Smith. The Gollnick and Pruteanu references are described above. The Smith reference discloses a container handling mechanism 30 for lifting refuse container 32 and dumping the contents thereof into hopper 29. As described above in connection with claim 19, the Office Action states that "Gollnick teaches ... a crusher panel 20 having a pivot end and a sweep end, said pivot end being pivotally mounted on the header tube so that said crusher panel may be pivoted about a pivot axis at its upper end between a first orientation in which the sweep end is generally disposed above the pivot end and a second orientation in which the sweep end is adjacent to the storage compartment floor". However, Figure 2 clearly shows that the Gollnick sweep panel 20 is pivoted between a first orientation in which the sweep end is disposed **directly below** the pivot end and a second orientation in which the sweep end is adjacent to the storage compartment floor. In contrast, Applicants' claim 20 requires that the crusher panel be mounted so that it pivots between a first orientation in which the sweep end is generally disposed **above** the pivot end and a second orientation in which the sweep end is adjacent to the storage compartment floor. Applicants submit therefore, that the §103(a) rejection of their claim 20 based on a combination of the Gollnick, Pruteanu and Smith references be withdrawn, and that claim 20 be allowed.

Applicants respectfully submit that all of their claims, as now submitted, are patentable over the prior art references cited in the Office Action, including those made of record but not relied upon. Applicants request therefore that the rejections of their claims be withdrawn and that claims 1-18, as amended, and claims 19 and 20 be allowed.

Respectfully submitted,



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